

Garrison Mobile Equipment (GME)-Alternative Fueled Vehicle

To meet the key objectives of Executive Order (EO) 13149 and the Energy Policy Act (EPA) of 1992, the Marine Corps developed a strategy for Alternative Fueled Vehicles (AFVs), which operate on fuels not made exclusively with petroleum. For example, there are vehicles dedicated to using only Compressed Natural Gas (CNG), vehicles that use CNG or gasoline/bi-fuel (CNG2), and flex-fuel E-85 vehicles that use E-85 (85 percent ethanol, 15 percent gasoline).

Of the 8,600-plus light-duty vehicles in the Marine Corps' Garrison Mobile Equipment (GME) fleet, more than 1,900 are AFVs. AFVs have an "incremental cost" structure, where the vehicle can be built in the alternative-fuel version for an additional cost. Depending on the type of vehicle, incremental costs can range from \$1,200 to \$30,000. The Marine Corps spends more than \$1 million annually on incremental costs. EPA of 1992 requires that 75 percent of all federal fleet replacement of light duty vehicles (in the metropolitan statistical covered areas) be AFVs. Additionally, under EO 13149, all federal fleets are required to reduce their petroleum fuel consumption by 20 percent by 2005, using 1999 consumption levels as a baseline.

The Marine Corps is very committed to AFVs and the fuels that power them.

It exceeded its EPA Federal Fleet Requirements in 2002 and 2003 by a compliance of 184 percent and 102 percent, respectively. The Marine Corps also exceeded the requirements of EO 13149 three years ahead of the required 2005 deadline. The significant accomplishments achieved in the AFV program were key to the Marine Corps, as well as the Commandant's Deputy Installation & Logistics being named by the Department of Energy as one of the 2003 annual Federal Energy and Water Management Leadership Award recipients. These awards recognize individuals and organizations for significant contributions to the efficient use of energy and water in the federal government.

As a forward-thinking Force in Readiness, the Marine Corps will see the introduction of hybrid and fuel-cell vehicles sometime in the future. While the hybrid vehicles use a combination of electric motors and gasoline engines to achieve efficient operation, fuel-cell vehicles use hydrogen to create electricity, but there is no combustion, so the byproduct of this process is pure water. The electricity that is created drives the electric motor that, in turn, drives the vehicle. □